AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of determining the depletion of Al and Cr of a γ/γ' MCrAlY-coating ~~applied to~~ of a component after use in a high temperature environment, ~~the γ/γ' MCrAlY-coating exhibiting a non-equilibrium γ/γ'-microstructure at a temperature lower than the temperature during operation,~~ the method comprising:

(a) using a component having a γ/γ' MCrAlY-coating in a high-temperature environment in which the γ/γ' MCrAlY-coating exhibits an equilibrium γ/γ'-microstructure,

(b) cooling the component to a temperature lower than the operation temperature such that the γ/γ' MCrAlY-coating exhibits a non-equilibrium γ/γ'-microstructure at room temperature,

~~(a)~~(c) applying a defined annealing heat treatment to the γ/γ' MCrAlY-coated component to transform the non-equilibrium high temperature γ/γ'-microstructure into the equilibrium room temperature microstructure with a α-Cr phase,

~~(b)~~(d) measuring ~~qualitative~~ qualitatively impedance curves or the ~~coating~~ electrical conductivity and magnetic permeability of the MCrAlY-coating by means of a multi-frequency eddy current system, and

~~(c)~~(e) determining the Al and/or Cr depletion of the coating from the measured ~~qualitative~~ impedance curves or coating conductivity and permeability.

2. (Original) The method according to claim 1, wherein from the Al and/or Cr depletion of the coating the remaining life-time of the coating is determined.

3. (Previously Presented) The method according to claim 1, wherein the coating consists of (wt.-%) 25% Cr, 5.5% Al, 1% Ta, 2.6% Si, 0.5%Y, rest Ni and unavoidable impurities.

4. (Previously Presented) The method according to claim 1, wherein a transformation heat treatment at a temperature of 800° - 870° C for 16 to 24 hours is applied.

5. (Previously Presented) The method according to claim 1, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

6. (Previously Presented) The method according to claim 2, wherein the coating consists of (wt.-%) 25% Cr, 5.5% Al, 1% Ta, 2.6% Si, 0.5%Y, rest Ni and unavoidable impurities.

7. (Previously Presented) The method according to claim 2, wherein a transformation heat treatment at a temperature of 800° - 870° C for 16 to 24 hours is applied.

8. (Previously Presented) The method according to claim 3, wherein a transformation heat treatment at a temperature of 800° - 870° C for 16 to 24 hours is applied.

9. (Previously Presented) The method according to claim 2, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

10. (Previously Presented) The method according to claim 3, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

11. (Previously Presented) The method according to claim 4, wherein after the operation the coating is heat treated with a temperature above 1000°C for at least 2 hours with a subsequent controlled cooling rate of 2-10 K/min from the heat treatment temperature down to below 800°C to transform the microstructure.

12. (Currently Amended) The method according to claim 1, wherein the ~~qualitative~~ impedance curves of the coating are measured.

13. (Previously Presented) The method according to claim 1, wherein the electrical conductivity and magnetic permeability of the coating are measured.